

**ATTACHMENTS TO THE
TECHNICAL SPECIFICATIONS**

WASHINGTON STATE FERRIES

M. V. ELWHA DRYDOCKING

CONTRACT NO. 00-6495

ATTACHMENTS TO THE TECHNICAL SPECIFICATIONS

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ATTACHMENT 1
WASHINGTON STATE FERRIES
MARINE COATING SPECIFICATION
AND COLOR SCHEME
REVISION NO. 1/02

1. PREPARATION AND APPLICATION

References: These references are applicable only to the extent specified herein.

A. Visual Standard for Abrasive Blast Cleaned Steel [SSPC-VIS-1-89]

B. Visual Standard for Power and Hand Tool Cleaned Steel [SSPC-VIS-3]

C. Steel Structures Painting Manual, Volume 2, Systems and Specifications [Fifth Edition]

D. Paint Manufacturer's Specification.

Steel Structures Painting Manual, Volume 2: Systems and Specifications [Fifth Edition], Chapter 2, titled Surface Preparation Specifications, shall be used to define the degree of surface preparation as required by the specification.

SSPC-SP 12 /NACE5 Surface Preparation and cleaning of Steel and Other Hard Materials by High-and Ultrahigh-Pressure Water jetting Prior to Recoating. SSPC Publication No.96-05

Visual Standards SSPC-VIS-1-89 and SSPC-VIS-3 form a part of this Contract and will be used to judge the adequacy of the surface preparation.

Surface preparation specified to be SSPC-SP10, "Near-White Blast Cleaning", shall be to SSPC Surface Preparation Specification No. 10 as defined in Chapter 2 of SSPC Volume 2.

Surface preparation specified to be SSPC-SP6, "Commercial Blast Cleaning", shall be to SSPC Surface Preparation Specification No. 6, as defined in Chapter 2 of SSPC Volume 2.

Surface preparation specified to be SSPC-SP7, "Brush-off Blast Cleaning", shall be to SSPC Surface Preparation Specification No. 7, as defined in Chapter 2 of SSPC Volume 2.

1 Surface preparation specified to be SSPC-SP3, "Power Tool Cleaning",
2 shall be to SSPC Surface Preparation Specification No. 3, as defined in
3 Chapter 2 of SSPC Volume 2.

4 Surface preparation specified to be SSPC-SP11, "Power Tool Cleaning to
5 Bare Metal", shall be to SSPC Surface Preparation Specification No. 11,
6 as defined in Chapter 2 of SSPC Volume 2.

7 The WSF Inspector will designate the areas to be surface prepared,
8 painted and the paint color/colors to be used unless otherwise designated
9 in the Specifications.

10 The Contractor shall grit blast the areas designated in each area to SSPC-
11 SP6, unless otherwise designated in the Specifications.

12 Existing paint coating bordering spot blasted areas shall be feathered to
13 achieve a smooth transition appearance, ensuring that edges are feathered
14 to make a smooth visual appearance to existing coating and that no rough
15 or sharp edges can be seen between existing and newly applied paint.

16 Grit blasted surfaces shall have a profile depth of 1-1/2 to 2-1/2 mils.

17 Immediately after grit blasting clean affected spaces and surfaces of
18 blasting material and residue

19 The blasted areas shall be coated the same day with paint to hold the blast.
20 If the blasted areas cannot be coated before the surface remains exposed
21 overnight, sand sweep to remove rust bloom prior to applying the paint.

22 Care must be exercised to see that dust and grit are not imbedded in soft
23 paint in the areas adjacent to the blasting.

24 Prior to coating application, ensure that all surfaces are dry and free of
25 foreign matter.

26 Surface Preparation and Paint Coating applications are to be in accordance
27 with the Paint Manufacturer's Specifications, using either airless spray or
28 conventional spray equipment. The back sides of angles, edges of
29 structural shapes, and areas that are incapable of being properly covered
30 by using conventional or airless spray equipment shall be hand-brushed to
31 insure that the minimum dry film thickness is obtained.

32 Thinning is not normally required or desirable, and shall not be done
33 unless authorized by the WSF Inspector. Solvents used for thinning and
34 cleaning shall be in strict accordance with the coating manufacturer's
35 recommendations, and shall be handled, stored, and disposed of in strict
36 accordance with current laws, rules, or regulations, whether local, State, or
37 Federal, pertaining to toxic and/or hazardous waste.

38 Dry Film Thickness (DFT), where specified, is the minimum dry film
39 thickness in mils.

40 Where both film thickness and number of coats is specified, both
41 requirements must be fully met.

Instruments used to measure film thickness shall have been recently calibrated in accordance with SSPC-SP-PA2, and shall be routinely re-calibrated if requested by the WSF Inspector.

Particular attention shall be paid to the temperature and humidity conditions at the time of application.

Keep surfaces clean and moisture-free during the coating process and during the curing period.

Prior to the application of any follow-on coat, thoroughly clean and build up any bare or lightly covered spots in the previous coat to the required thickness. Dirt, drips, runs, and sags are to be removed prior to follow-on coating application.

The finish coat is to completely obscure the undercoat, and be free of surface imperfections such as dirt, drips, runs, sags, dry spray and other imperfections. The finish coat is to have a smooth and glossy appearance when dry, except for areas requiring otherwise, ie Navigation Light screens.

Where any coating has been damaged by welding, burning, or other causes, repair the damaged area by blasting or power sanding, ensuring that edges are feathered to make a smooth visual appearance to existing coating and that no rough or sharp edges can be seen between existing and newly applied paint; and no sanding swirls or other marks will remain after the final coat is applied.

During inclement weather, provide surface protection (tarpaulins, plastic sheeting, etc.) for areas being painted. All painting shall be done under conditions of temperature and relative humidity specified by reference (D).

Clean affected spaces and surfaces of paint over-spray immediately. Care shall be taken to prevent damage to such items.

Deck coating may be applied by roller or other means recommended by the manufacturer.

Painting and inspections shall be scheduled for daylight hours only.

Upon completion of blasting and before inspection of a blasted area, all grit shall be removed from the inspection area by blowing down with air or other means. Upon completion of inspection and acceptance of blasted area by WSF Inspector, and before paint application, all blasting media shall be removed from all surfaces. Decks shall be broom clean.

The WSF Inspector will inspect all prepared surface areas upon completion of preparation, and before any paint is applied on prepared surfaces. Upon completion of each paint coat, the WSF Inspector will inspect painted area for proper paint application before the next coat is applied. It is the responsibility of the Contractor to ensure that all required inspections are completed before continuing work.

NOTE: It is incumbent upon the Contractor to provide the WSF Inspector with timely notification in order to preclude delays in required inspections.

Failure to obtain the WSF Inspector's approval, where required, may require re-preparation and coating, wholly at the expense of the Contractor.

WSF will enlist the services of the paint manufacturer's representative to assist the WSF Inspector in overseeing the preparation of the surfaces and paint application.

The WSF Inspector may conduct the following tests:

1. Surface profile gage readings.
2. Wet and dry film thickness gage readings.
3. Holiday inspection, using a high or low voltage holiday detector.
4. Surface temperature gauge readings.
5. Dry film thickness gauge readings using a Tooke gauge.
6. Surface contamination

Ensure that prior to beginning superstructure, blasting the edges of the stripe on the curtain plates and the stacks are measured for applying paint to proper location.

Remove the WSDOT stack insignia, and reinstall prior to re-delivery of the Vessel when effected by the work Specifications.

Carefully mask and protect machinery, ventilation ducts, tank vents, void vents, name plates, identification labels, valve stems, fire hoses, bright work, glass, trim, wiring, light fixtures and other such items and materials which could be damaged by abrasive blasting, dust associated with the process, or other surface preparation techniques, or which could have their function and appearance degraded by blasting or paint over-spray. If removal is required, **Note and Map** the location of all items removed. Upon completion of painting, all items removed shall be re-installed in their original locations.

All plastic and brass signs in affected work areas shall be masked or removed, prior to painting or grit blasting, to prevent damage. If removal is required, **Note and Map** the location of signs. Upon completion of final paint coating, all signs removed shall be re-installed in their original location, using new 316 Stainless Steel fasteners where applicable.

Fire station boxes, fire ax boxes, fire extinguisher boxes, fire hoses, life ring holders, low-clearance and height signs shall be removed in affected work areas before grit blasting. Upon completion of painting, all items removed shall be painted and re-installed in their original locations.

- 1 All painted stencils and markings affected by grit blasting or painting shall
2 be re-painted upon completion of final paint coating in their proper color
3 and location.
- 4 All windows shall be protected from blasting or painting by a protective
5 covering, using plywood or other means determined to be satisfactory by
6 the WSF Inspector. Affected windows shall be hose tested upon
7 completion of paint work. Upon completion of cleaning and painting, all
8 windows affected by the work shall be washed.
- 9 Ventilation fans located outboard in overhead shall be blasted after
10 removing or in place. In either case, the motors shall be protected and
11 steps taken to prevent grit from getting into ducting before grit blasting.
- 12 Decks in area of painting shall be protected in order to prevent paint over-
13 spray. All over-spray shall be removed upon completion of painting.
- 14 Deck drains on all deck levels shall be clear of obstructions and proper
15 operation shall be demonstrated to the WSF Inspector before re-delivery.
- 16 Vessel wood name signs, wood doors, wood benches and wood trim, when
17 affected by the work Specifications, shall be removed, sanded smooth,
18 refinished and/or repainted in the proper colors as required.
- 19 Doors leading to passenger spaces shall be repainted to their proper color
20 as required.
- 21 Care shall be taken when blasting doors to prevent warping of doors.
- 22 Life preserver locker release mechanisms shall be tested upon completion
23 of painting to ensure proper operation when affected by the work
24 Specifications.
- 25 Rescue-boat launching apparatus shall be protected during painting or
26 blasting to prevent blasting media from getting into rollers, etc.
- 27 Piping insulation shall be removed or protected before blasting. If
28 removed or damaged, it shall be renewed using new insulation at the
29 Contractor's expense.
- 30 Vent screens installed in vent bells shall be protected against blasting and
31 painting.
- 32 All valve handles shall be painted in their proper colors.
- 33 Ventilation louvers shall be removed, blasted and painted on both sides,
34 and re-installed. Care shall be taken to ensure that blasting media does not
35 enter vents, and louvers are not damaged during grit blasting. Louvers
36 shall be re-installed in their original location, using new 316 Stainless
37 Steel fasteners where required.
- 38 All protective covering shall be removed upon completion of final paint
39 coating.

All other work under this Contract shall be coordinated with this paint work to ensure a complete and proper coating system.

NOTE: On certain vessels, an impressed current cathodic hull protection system is installed. When applying coating systems on the hull in way of the anodes, ensure that none of the anodes or the reference cells are damaged or covered over with paint.

Apply special coatings around the anodes under the anti-fouling coating as required by the manufacturer of the impressed current system as applicable.

2. COLOR SCHEME

Pilothouse tops and the top and bottom of visors, and any other structures on the Texas deck having a canopy top with a curved edge (no coaming), are to be **medium green**.

The tops of all other structures not having a canopy top with a curved edge (has a coaming), including the crew's quarters, the stack house, and machinery houses are to be **haze gray**.

Interior curtain plates and machinery casings are to have a **haze gray** dado approx. 39" up from the deck, or follow the height of the first longitudinal below curtain plate window cut-outs.

Car decks and car ramps in areas that are painted are to be **dark gray**.

All other exterior decks are to be **haze gray**.

All exterior white is to be **blue white**.

Stanchions, railings, cap-rails, and both sides of all screens are to be painted **medium green** on the Texas deck/Sun deck, and the Bridge deck.

Railing on the car deck ramps and on the elevator access ramps shall be painted solid **signal yellow**.

All curbing against the curtain plating is to have the vertical surfaces and the first six inches (6") of the horizontal surface painted **signal yellow**. The remainder of the curbing, extending to the curtain plate, is to be **haze gray**.

All curbing against **machinery** casing and all round bumpers are to be solid **signal yellow**.

The exterior curtain plate stripe above the guard is to be **medium green**.

Stacks shall be painted **blue white** with a **medium green** stripe at the bottom and a **black** stripe at the top.

All fire stations, emergency stations, fire ax boxes etc., are to be **signal red**.

Exterior gutters between decks are to be painted **haze gray**.

Issaquah Class Vessels shall have their masts painted **flat black** from the bottom edge of the Radar platform up the entire height of the mast.

All exhaust stack tubes are to be **flat black** good to 1300 degrees f.

The exterior side of doors is to be painted **blue white**; the exterior side of all machinery casing doors is to be painted **haze gray** unless otherwise specified.

The interior of all shelter decks are to be **blue white** with a **haze gray** dado from the deck up six inches (6"), including the passenger cabin bulkheads.

All vessels are to have a six inch (6") **haze gray** dado up from the deck around the exterior passenger cabin, pilothouse and promenade bulkheads.

Promenade decks, pickle-fork decks, and Texas decks are to be coated with **haze gray** non-skid in traffic areas. No non-skid is to be applied under seating, or within four inches (4") of bulkheads, coamings, or other vertical surfaces.

Car deck non-skid walkways are to be painted with **dark gray** non-skid and striped with a four inch (4") **signal yellow** stripe on each outside edge.

Car decks are to have **black** and **signal yellow** striping in way of elevator entrances, entry ways to machinery casings, and emergency gear lockers. Car deck hatches to steering gear spaces, emergency escapes, etc., are to be **signal yellow**.

A nine inch (9") **gold** stripe shall be painted on the stack six inches (6") above the **medium green** stripe, using One Shot Brand Lettering Enamel 109L-Metallic Gold on vessels built 50 or more years ago.

ALUMUNUM SURFACES

Grit blasting material shall be of non-ferrous material and approved by WSF:

A. 30 Mesh Garnet

B. Aluminum Oxide

C. Ilminite

D. Other material as authorized by WSF

Immediately after surface preparation of new aluminum, remove all surface contaminates, obtain concurrence from WSF's Inspector, and apply the applicable primer to prevent surface oxidation.

Under no circumstances leave freshly prepared aluminum overnight without primer. Should freshly prepared aluminum be left un-primed, the Contractor shall remove all traces of contamination and surface oxidation. All re-work shall be wholly at the expense of the Contractor.

Application of primer coats later the same day of preparation will only be allowed in an area where the Contractor has exercised humidity control sufficient to prevent the occurrence of any surface oxidation and after the inspection and approval of that area by WSF just prior to coating.

Unless otherwise specified, the coating system shall be the products of the International Paint Co.

GALVANIZED AND STAINLESS STEEL

Contractor shall prepare surfaces per SSPC 3, Power Tool Cleaning and SSPC 1, Solvent Cleaning.

Upon the acceptance of the Surface Preparation by the WSF Inspector apply International acid etch primer ZTA 528/529 two (2) part primer at .5 mils DFT.

Upon the acceptance of the prime coat by the WSF Inspector apply International KH 302 at 5 mils DFT and final coat of ESB, of proper color at 2 mils, DFT.

(END)

(FOR M.V. ELWHA DRYDOCKING CONTRACT

ATTACHMENTS NO. 2-13,

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(Vacant)

The text on this page is not applicable to this project.